

## CLAIMS

1. Method for authenticating a client (110, 111, 112) for access to at least one virtual network (162, 163) which allows the client to access the services of at least one service provider (130, 131), the or each virtual network being set up on a telecommunication network (150), characterised in that the method comprises the steps of:

- determining the compatibility (E300) of the client with a predetermined access control protocol for access to the virtual network,

- if the client is not compatible with the predetermined access control protocol, authorising (E301) data transfer between the client and at least one subscription system (140, 142) for subscribing the client to at least one service provider via an authentication network (160) which is different from the or each virtual network (162, 163) which allows a client to access the services of the or each service provider,

- if the non-compatible client subscribes to at least one service provider via the authentication network (160), transferring (E306) to the non-compatible client an authentication for accessing the virtual network (162, 163) which allows access to the services of the service provider (130, 131) to which the non-compatible client is subscribed and information which makes it possible to make the client compatible with the predetermined access control protocol.

2. Method according to Claim 1, characterised in that the authentication network (160) is a virtual network or a network that is separate from the telecommunication network.

3. Method according to Claim 1 or 2, characterised in that the subscription system consists of at least one subscription portal (140), an authentication material

server (140) and, when the client subscribes to a service, the subscription portal transfers to an authentication server (141) data associated with the authentication transferred to the client.

4. Method according to Claim 3, characterised in that the client is connected to the network via a Digital Subscriber Line Access Multiplexor (100) and, if the client is compatible with the predetermined access control protocol, the Digital Subscriber Line Access Multiplexor performs (E308) the steps of obtaining an identifier and a client authentication material and of obtaining a client authentication confirmation from the authentication server.

5. Method according to Claim 4, characterised in that, if the authentication server (141) does not confirm the authentication of the client, the method comprises a step of authorising (E301) data transfer between the client and at least one subscription system for subscribing the client to at least one service provider via an authentication network which is different from the virtual networks which allow a client to access the services of at least one service provider.

6. Method according to Claim 3 or 4, characterised in that information associated with the service provider to which the client is subscribed and/or information characterising the service to which the client is subscribed is also transferred to the authentication server.

7. Method according to Claim 6, characterised in that the authentication server (141) additionally transfers to the Digital Subscriber Line Access Multiplexor the information associated with the service provider to which the client is a client and/or the information relating to

the service or services to which the client is subscribed.

8. Method according to Claim 7, characterised in that the Digital Subscriber Line Access Multiplexor authorises data transfer between the virtual network which allows the client to access the services of the service provider to which the client is subscribed according to the communication speeds to which the client is subscribed.

9. Method according to any one of Claims 1 to 8, characterised in that an address server (140) is also associated with the virtual authentication network, and in that the address server allocates an address to the client for data transfer on the virtual authentication network (160).

10. Method according to any one of Claims 1 to 9, characterised in that the telecommunication network is a high-speed network based on Ethernet technology, and in that the predetermined access control protocol is a protocol of the IEEE 802.1x type, and in that the clients are connected to the Digital Subscriber Line Access Multiplexor via connections of the DSL type.

11. System for authenticating a client (110) for access to at least one virtual network (162, 163) which allows the client to access the services of at least one service provider (130, 131), the or each virtual network being set up on a telecommunication network (150), characterised in that the system comprises:

- means (200) for determining the compatibility of the client with a predetermined access control protocol for access to the telecommunication network,

- authorisation means (200) for authorising, if the client is not compatible with the predetermined access control protocol, data transfer between the non-compatible client and at least one subscription system

for subscribing the client to at least one service provider via a network (160) which is different from the virtual networks which allow a client to access the services of a service provider,

- means (200) for transferring to the non-compatible client, if the non-compatible client subscribes to at least one service provider via the authentication network (160), an authentication for accessing the virtual network (162, 163) which allows access to the services of the service provider (130, 131) to which the non-compatible client is subscribed and information which makes it possible to make the client compatible with the predetermined access control protocol.

12. Computer program stored on an information support, said program comprising instructions which make it possible to carry out the authentication method according to any one of Claims 1 to 10 when it is loaded and run by a computer system.

13. Digital Subscriber Line Access Multiplexor (100) which allows at least one client (110) to access the services of at least one service provider (130, 131), characterised in that the client line multiplexor (100) comprises means for relaying the information transmitted by the client and associated with authentication of the client to an authentication server (141).

14. Multiplexer according to Claim 13, characterised in that the means for relaying the information associated with authentication comprise a software module according to the IEEE 802.1x standard.